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Applied relaxation: an experimental analogue study of therapist vs. computer administration

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Abstract

This experimental analog component study compared two ways of administrating relaxation, either via a computer or by a therapist. The second phase of applied relaxation was used, which is called ''release-only relaxation''. Sixty participants from a student population were randomized to one of three groups: computer-administered relaxation, therapist-administered relaxation, or a control group in which participants surfed on the Internet. Outcome was measures using psychophysiological responses and self-report. Objective psychophysiological data and results on the subjective visual analogue scale suggest that there was no difference between the two forms of administration. Both experimental groups became significantly more relaxed than the control group that surfed on the Internet. Practical applications and future directions are discussed.
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Keywords: Applied relaxation; Computer administration; Internet; Psychophysiology

1. Introduction

Computer-mediated psychological interventions have been developed for a few conditions (Marks, Shaw, & Parkin, 1998), and the advent of the Internet made it possible to

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disseminate computer based treatment to a large number of people (Smith & Senior, 2001). Recently, Internet-based self-help treatment has been tested for a range of conditions, and there is now a need for experimental component studies on how well psychological interventions can be transferred into computer-mediated self-help. One suitable technique for such a test could be applied relaxation (AR) which is a coping skill that enables the patient to relax rapidly, in order to counteract, and eventually alleviate their anxiety reactions altogether (Öst, 1987). AR has been used in a number of studies on self-help via the Internet targeting panic disorder (Carlbring, Ekselius, & Andersson, 2003), insomnia (Ström, Pettersson, & Andersson, 2004), tinnitus (Andersson, Strömgren, Ström, & Lyttkens, 2002), headache (Andersson, Lundström, & Ström, 2003; Ström, Pettersson, & Andersson, 2000), chronic pain (Buhrman, Fältenhag, Ström, & Andersson, 2003), and stress (Zetterqvist, Maanmies, Ström, & Andersson, 2003). However, given the way that these studies have been conducted (e.g., from the participants home/own computer) it has not been possible to investigate physiological effects of relaxation training.

The full program of AR consists of several phases. The first phase includes teaching the patient to relax with the help of progressive relaxation (Jacobson, 1938). Typically, a therapist, who first demonstrates how the different muscle groups should be tensed and then relaxed, teaches progressive relaxation. The patient does the different tension-release cycles at the same time; the therapist checks that they are being done properly, and any questions or unclear points are dealt with. Then the patient closes his/her eyes and the therapist instructs him/her to tense and relax the different muscles in the right order and at the correct tempo. Interestingly, it has not been convincingly proven that the tension instruction (i.e., muscle contraction) is necessary to achieve relaxation (Lucic, Steffen, Harrigan, & Stuebing, 1991).

The second phase of AR is *release-only relaxation* in which the time it takes the patient to become relaxed is reduced from 15–20 to 5–7 min. The release-only relaxation means that the therapist deletes the instructions concerning the tensing of the muscle groups (Öst, 1987). Instead the therapist instructs the patient to relax these muscle groups directly, starting at the top of the head and working through right down to the toes. Cue-controlled relaxation, differential relaxation, rapid relaxation, and finally the application training follow the second phase.

A review by Öst (1987) of 18 controlled outcome studies revealed that AR has been used for different phobias, panic disorder, headache, pain, epilepsy, and tinnitus. The results showed that AR was significantly better than no-treatment, or attention-placebo conditions, and as effective as other behavioral methods with which it was compared. At follow-up after 5–19 months the effects were maintained, or further improvements were obtained. AR has also been adopted for uses in treatment of generalized anxiety disorder (GAD). In two recent studies AR has proven to be equally as effective in treating GAD as Cognitive therapy, which demands much more of the therapist (Arntz, 2003; Öst & Breitholtz, 2000).

Common to all the self-help studies conducted via the Internet is the absence of face-to-face therapist contact. Hence, the therapist cannot demonstrate the different muscle groups that should be tensed and then relaxed, or check that the different tension-release cycles are properly done. A question that came up during these trails was whether Internet-administered AR was equally effective as therapist-administered AR. In an attempt to answer this question the present experimental component study was initiated. In order to